

35 U.S.C. §102:

Claims 1-11, 16-22, and 25-28 were rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Reference No. JP 09-326259-A ("JP '259"). JP '259 was described as disclosing a solid oxide fuel cell with planar first and second interconnects, a planar ceramic cell, and a number of gas tubes in communication with the ceramic cell.

The Applicant respectfully traverses the rejection of Claim 1 and the dependent claims thereon. Unlike the cited reference, each claim herein describes a "unitized" solid oxide fuel cell. The term "unitized" is described in the specification as "intended to generally mean a self-contained fuel cell that can be replaced from a fuel cell stack without impairing the performance of the overall stack, such as by damaging adjoining cells." See page 8, lines 1-3. To the extent that JP '259 can be understood, the reference appears to show a conventional multi-cell stack. Instead of attaching each interconnect to a gas inlet or outlet, Fig. 4b of JP '259 appears to show a gas inlet 22 and a gas outlet 23 serving a number of cells 1. As such, JP '259 does not describe a first gas inlet affixed to the first interconnect, a second gas inlet affixed to the second interconnect, a first gas outlet in communication with the first gas inlet, and a second gas outlet in communication with the second gas inlet.

The Applicant also questions whether JP '259 even shows a planar first interconnect that allows a first gas to flow therethrough, a ceramic cell adjacent to the first interconnect, and a planar second interconnect adjacent to the ceramic cell that allows a second gas to flow therethrough. To the extent that the abstract is enabling, it appears that gas inlets and outlets 13, 14, and 17 are designed to allow gas to flow through the electrode as opposed to adjacent to a ceramic cell as is claimed herein.

The Applicant thus submits that Claim 1, and the dependant claims thereon, are patentable over the cited reference. Allowance of the claims is respectfully solicited.

The Applicant respectfully further traverses the rejection of Claim 2 for the reasons described above and because neither Fig. 4a or 4b of JP '259 appear to show a tube affixed to an interconnect.

The Applicant respectfully further traverses the rejection of Claim 7 for the reasons described above and because JP '259 does not describe substantially parallel gas inlets.

The Applicant respectfully further traverses the rejection of Claim 10 for the reasons described above and because JP '259 does not appear to show a plurality of gas tubes having a T-shape.

The Applicant respectfully further traverses the rejection of Claim 11 for the reasons described above and because JP '259 does not appear to show a plurality of gas tubes having a cross-member portion and an inlet portion.

The Applicant respectfully traverses the rejection of independent Claim 16 and the dependent claims thereon for the reasons described above with respect to Claim 1. As described above, JP '259 does not describe a unitized solid oxide fuel cell. JP '259 certainly does not describe fuel or oxidant inlets or outlets that are "affixed" to the first and second interconnect. The Applicant thus submits that the claims are patentable.

The Applicant respectfully further traverses the rejection of Claims 20 and 21 for the reasons described above and because JP '259 does not appear to show a fuel inlet and an oxidant inlet secured on opposite sides of the cell or a fuel outlet and oxidant

outlet secured on opposite sides of the cell in the opposite direction so as to provide a co-flow pattern.

The Applicant respectfully further traverses the rejection of Claim 22 for the reasons described above and because JP '259 appears to be silent on a fuel inlet and outlet and an oxidant inlet and outlet secured on the same side of the cell so as to provide a co-flow pattern.

The Applicant further traverses the rejection of Claims 27 and 28 for the reasons described above and because JP '259 does not appear to show a fuel inlet secured on a first side of a cell with the outlet secured on the third side or the oxidant inlet secured on the second with the oxidant outlet secured on the third side so as to form a co-flow pattern.

35 U.S.C. §103:

Claims 1-6, 9, 16-20, and 24-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Ref. No. JP 04-342439-A ("JP '439"). JP '439 was described as having a solid electrolyte fuel cell with planar first and second interconnects disposed between a ceramic electrolyte and with gas tubes connected to the respective interconnects.

The Applicant respectfully traverses the rejection. As described above, Claim 1 and the dependant claims thereon recite a unitized solid oxide fuel cell. As such, the cell includes a number of gas tubes in communication with the cell including a first gas inlet affixed to the first interconnect and a second gas inlet affixed to the second interconnect. Although it is not entirely clear what JP '439 is disclosing, there is clearly no first or second gas inlet and no indication that JP '439 has any relevance to a unitized

solid oxide fuel cell. Although the Examiner argues that it would have been obvious to one of ordinary skill in the art to provide such inlets, the Applicant submits that the opposite is true. In the case of a conventional stack of fuel cells, it would not be obvious to one of ordinary skill in the art to have *each* cell affixed to a first and second gas inlet. The Applicant thus submits that without an indication of relevance to a unitized fuel cell, Claim 1 and the dependant claims thereon are patentable.

The Applicant further traverses the rejection of Claim 4 for the reasons described above and because JP '439 does not describe the first and second gas inlets having cylindrical shapes.

The Applicant further traverses the rejection of Claim 5 for the reasons described above and because JP '439 does not describe a first or second gas inlet.

The Applicant further traverses the rejection of Claim 6 for the reasons described above and because JP '439 does not describe a first or second gas inlet.

The Applicant further traverses the rejection of independent Claim 16 and the dependant claims thereon for the reasons described above with respect to Claim 1. As described above, JP '439 is silent on any type of fuel inlet or oxidant inlet affixed to an interconnect.

The Applicant respectfully further traverses the rejection of Claim 20 for the reasons described above and because JP '439 JP does not appear to show a fuel inlet and an oxidant inlet secured on opposite sides of the cell or a fuel outlet and oxidant outlet secured on opposite sides of the cell in the opposite direction so as to provide a co-flow pattern.

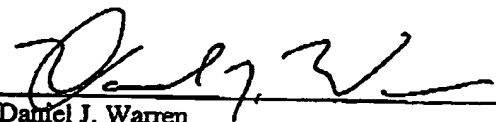
The Applicant further traverses the rejection of Claims 27 and 28 for the reasons described above and because JP '439 does not appear to show a fuel inlet secured on a first side of a cell with the outlet secured on the third side or the oxidant inlet secured on the second with the oxidant outlet secured on the third side so as to form a co-flow pattern.

Claims 22 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP '259 in view of Japanese Ref. No. JP 57-138782-A ("JP '782"). JP '782 was described as showing a fuel inlet and outlet on the single side of an interconnect. The Applicant respectfully traverses the rejection for the reasons given above and because it is not entirely clear that JP '782 in fact shows such a configuration.

CONCLUSION

The Applicant believes it has responded to each matter raised in the Office Action. Allowance of all claims is respectfully solicited. Any questions may be directed to the undersigned at 404.853.8028.

Respectfully submitted,


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